

## How to Disprove Demis Hassabis' Misleadings on Sciences and AlphaGo

I summarize the main misleadings from Demis Hassbis about sciences and AlphaGo in the presentation: <https://www.youtube.com/watch?v=SEc1MnZpFgY>.

Demis Hassbis claimed :

- 1) AlphaGo is a general purpose learning system. (However, it is not even a general purpose system for Go playing!)
- 2) All the algorithms we worked on in Deepmind...they all learned automatically how to master the tasks, ,not pre-programmed. (Not true!)
- 3) Develop Artificial General Intelligence (AGI) with deeplearning and reinforcement learning. (Not true!)
- 4) We(deepmind) designed a new kind of organization way to do sciences and scientific researches. (Not true!)

Sciences are based on experiments. I could design experiments to disprove Demis Hassbis' claims. If Demis Hassbis insists on that AlphaGo be scientific, he needs take the experiments. Very surprisingly,

- 5) Demis Hassbis truly mentioned AGI as a meta solution for all other problems, in the end of the presentation.

Demis Hassbis should know AlphaGo is not the optimal solution for Go games. What is wrong in the so called "Universal Approximator" should be studied if AlphaGo cannot pass certain fair and strict experiments, or if it even refuses to take the experiments [\*].

In mathematics, Hilbert's program failed due to Gödel theorems.

If Demis Hassbis refuses to take strict and fair experiments on AlphaGo, but advocates AGI as a meta solution or One Model to Learn Them All, it would be more misleading to sciences, and could destroy the experimental bases in other research areas, thus cause huge disasters in future.

Should Nature magazine encourage such a wrong movement ?

Parts of Demis Hassabis' problems are due to his ignorance in the histories of both sciences and Go games.

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Deep Learning feature abstraction semi-supervised learning  
deep Learning AlphaGo

Deep learning feature abstraction

AlphaGo is retiring Nature paper

[\*] I design these experiments specifically for AlphaGo (due to its leading position, the Nature paper, and the claims from Demis Hassbis that it is a scientific, generic, not pre-programmed solution, etc.) so some of the claims could be tested, and human players could have fair chances to compete with AlphaGo and study it. It is improper to retire AlphaGo now in such a situation.

Repeatability is not the only requirement for sciences. I only question the scientific aspect of AlphaGo with experiments, not the game aspect. Actually many years ago I already started to believe that computer Go software could defeat top human players, according to my intelligence theory. Just some claims about AlphaGo should be tested, especially after Nature published the AlphaGo paper. The first round experiments should be done with AlphaGo, to test its claims effectively. After that I welcome other computer Go softwares to participate the experiments. These experiments would not ask Go software makers to reveal their business secrets.